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## 2014 Pesticide Safety: Generics

Martha Sylvia

*UMass Cranberry Station*, [martys@umass.edu](mailto:martys@umass.edu)

Hilary A. Sandler

*University of Massachusetts - Amherst*, [hsandler@umass.edu](mailto:hsandler@umass.edu)

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# Generics?

Save Money, Lose Efficacy?

Marty Sylvia, Hilary Sandler  
UMass Cranberry Station

Pesticide Safety Meeting April 15, 2014

# Generics vs Branded

- Companies like [Bayer](#), [Dow Chemical](#), and [Syngenta®](#) invest millions of dollars and years testing, researching and formulating the active ingredients found in [branded pesticides](#).
- Once an active ingredient (AI) is patented, the company has **17 to 20 years of exclusivity**.
- However, when the patent expires, companies can purchase the rights to the AI and create their own generic pesticide.
- Because they did not pay the cost of developing and maintaining the original AI in the branded pesticide, the generic company is able to sell the generic pesticide at a cheaper price.

# Generics

- Both generic and branded pesticides have the same active ingredient.
- Therefore, generic and brand name pesticides **should technically** deliver the same results.

# Generics

- Some key differences to consider when deciding to purchase one over the other.
- **Quality and reliability:** a consistent, optimized formula and quality from batch to batch.
- **Customer and product support:** while the products, formulations and results might be similar between branded and generic pesticides, the service is often very different.
- **Continued product innovation:** once a new formulation is developed, the work doesn't stop.
- **Industry support:** Manufacturers have the best interest of the industry's future. Manufacturers invest time and money to build strong foundations for the future.
- **Investment in safety and sustainability:** brand manufacturers invest time and money to promote best practices to each industry.

- A generic pesticide is as one which is manufactured by a company other than the original manufacturer
- In 1996, patent-protected active substances accounted for 47% of the total global agrochemical market.
- Up to 60% of the herbicide market is now generics.

- The biggest generic producer is the Israeli company Makhteshim-Agan.
  - In the top 20 agrochemical companies world-wide
  - Sales rising faster than any other R&D company
- MANA is Makhteshim Agan of North America, Inc., a North American subsidiary of [Makhteshim Agan Industries](#), Ltd.

Acephate 97 UP (Acephate - Orthene)  
Alias 2F and 4F (Imidacloprid - Admire)

Chlorpyrifos 4E AG (chlorpyrifos - Lorsban)  
Vulcan (chlorpyrifos - Lorsban)

Diazinon 50W (only producer of Diazinon)  
Diazinon AG500

Mana Arrow 2EC (clethodim - Select)

Equus 500 ZN (Chlorothalonil - Bravo)  
Equus 720 SST (Chlorothalonil - Bravo)  
Equus DF (Chlorothalonil - Bravo)

Glyphogan (glyphosate – Roundup Original)  
Glyphogan Plus (glyphosate – Roundup Max)

3 kinds of 2-4 D  
Quinclorac (but not for cranberry)  
Diamond (Novaluron - Rimon)  
Current IR-4 project compound is from MANA

# Generics

- Some are cheaper, some are the same!
- Ag Suppliers carry some, not all!
- Compare cost per acre
- Sevin XLR \$25-26/A Carbaryl 4L \$22-24/A
- Orthene 97 \$7/A Acephate 97UP \$7-8/A



# Generics

- Some are cheaper, some are the same!

- Compare cost per acre

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- Sevin XLR \$25-26/A      Carbaryl 4L \$22-24/A
- 

- Orthene 97 \$7/A      Acephate 97UP \$7-8/A
- 

- Bravo Ultrex      \$28-30/A

- Bravo Weather Stik      \$23-24/A

- Chloronil 720      \$23/A

- Initiate 720      \$23/A

# Generics

- Some are cheaper, some are the same!

- Sevin XLR \$25-26/A    Carbaryl 4L \$22-24/A

- Orthene 97 \$7/A    Acephate 97UP \$7-8/A

- Bravo Ultrex \$28-30/A

- Bravo Weather Stik \$23-24/A

- Chloronil 720 \$23/A

- Initiate 720 \$23/A

Compare cost  
per acre

- Dithane F-45 Rainshield (37% ai) **\$36-37/A**

- Manzate Flowable (37% ai) **\$38-40/A**

at 4.8 qts/A  
= 4.8 lb AI

- Manzate Pro-Stick (75% ai ) **\$21-22/A**

- Roper DF Rainshield (75% ai) **\$21-22/A**

at 6 lb/A  
= 4.5 lb AI

# Generics

- Roundup vs glyphosate generics
  - When comparing check equivalent AI and percent AI
  - Not Home Depot, 1% or 18% vs. 49% AI
  - Bullseye has no sticker
- Roundup PowerMax (48.7% AI) \$31-34/gallon
- Roundup WeatherMax (48.8% AI) \$38-40/gallon
- Generics range
  - Mirage, Clearout, Makaze
  - (41% AI) \$22-25/gallon

# Copper Generics

- Copper Oxychloride 16.8%
- Copper Hydroxide 15.4%
- Badge SC (7 pts) \$22/A OMRI (organic certified)
- Copper Oxychloride 23.8%
- Copper Hydroxide 21.5%
- Badge X2 (3.5 lb) \$30/A OMRI
- Copper Hydroxide 37.5% AI
- Champ Formula 2 Flowable (5.33 pt) \$25-27/A
- Copper Hydroxide 57.6% AI
- Champ DP Dry Prill (5.3 lb) \$30-32/A
- Copper Hydroxide 46.1% AI
- Kocide 3000 (3.5 lb) \$33-36/A OMRI

# Admire vs imidacloprid generics

## Price per acre



|                           | Rate Range      | High Rate       | actual        | Comparative        |                 |
|---------------------------|-----------------|-----------------|---------------|--------------------|-----------------|
| <b>INSECTICIDES</b>       | <b>Per Acre</b> | <b>Per Acre</b> | <b>\$\$\$</b> | <b>Cost Rating</b> | <b>Efficacy</b> |
| Admire Pro (imidacloprid) | 7-14 fl oz      | 14 fl oz        | 32-34         | \$\$               | 2               |
| Alias 2F (imidacloprid)   | 16-32 fl oz     | 32 fl oz        | 11-12         | \$                 | 2               |
| Nuprid (imidacloprid)     | 16-32 fl oz     | 32 fl oz        | 25            | \$\$               | 2               |
| Wrangler (imidacloprid)   | 8-16 fl oz      | 16 fl oz        | 18-24         | \$                 | 2               |

# Clethodim Generics

- Select vs Intensity vs MANA Arrow 2EC
- Select Max (37% ai) **\$100/gallon = \$12/A**
- Intensity One (37% ai) **\$85/gallon = \$10/A**
- MANA Arrow 2EC (75% ai) **\$??/gallon**



# Phytophthora root rot

## FOLIAR

Aliette (\$70)

### Phosphites

Fosphite Fungi-Phite

Helena ProPhyt

K-Phite 7LP AG

Phostrol (\$20)

Rampart (\$12)

## SOIL APP

### Mefenoxam

Ridomil Gold SL(\$175)

Ridomil Gold GR(\$175)

Ultraflourish (\$126)

### Metalaxyl

Old Ridomil (10 yrs ago)

Metastar 2EC

Two year-old Crimson Queen bed

# Generics

- MANA making many generics but not supporting new cranberry pesticide registrations
  - Only registrant of Diazinon though!
  - And supporting new IR-4 compound
- Dow, Bayer, Syngenta and Dupont charge more for product but are paying to register new products
  - New compounds coming down the pike?



# Generics

- Save Money
- Manzate ProStick or Roper cheaper than Manzate Flowable or Dithane
- Imidacloprid for grubs in late July, big price differential
- Save \$20/gallon on generic glyphosate
- Phosphites far cheaper than Aliette/Ridomil options for Phythophthora